

HDAC-5004-C1 Sequence List.ST25.txt  
SEQUENCE LISTING

<110> SYRRX, INC.

<120> CRYSTALLIZATION OF HISTONE DEACETYLASE 2

<130> SYR-HDAC-5004-C1

<160> 5

<170> PatentIn version 3.3

<210> 1

<211> 488

<212> PRT

<213> Homo sapiens

<220>

<221> Amino acid sequence for full length human HDAC-2

<222> (1)..(488)

<400> 1

Met Ala Tyr Ser Gln Gly Gly Gly Lys Lys Lys Val Cys Tyr Tyr Tyr  
1 5 10 15

Asp Gly Asp Ile Gly Asn Tyr Tyr Tyr Gly Gln Gly His Pro Met Lys  
20 25 30

Pro His Arg Ile Arg Met Thr His Asn Leu Leu Leu Asn Tyr Gly Leu  
35 40 45

Tyr Arg Lys Met Glu Ile Tyr Arg Pro His Lys Ala Thr Ala Glu Glu  
50 55 60

Met Thr Lys Tyr His Ser Asp Glu Tyr Ile Lys Phe Leu Arg Ser Ile  
65 70 75 80

Arg Pro Asp Asn Met Ser Glu Tyr Ser Lys Gln Met Gln Arg Phe Asn  
85 90 95

Val Gly Glu Asp Cys Pro Val Phe Asp Gly Leu Phe Glu Phe Cys Gln  
100 105 110

Leu Ser Thr Gly Gly Ser Val Ala Gly Ala Val Lys Leu Asn Arg Gln  
115 120 125

Gln Thr Asp Met Ala Val Asn Trp Ala Gly Gly Leu His His Ala Lys  
130 135 140

Lys Ser Glu Ala Ser Gly Phe Cys Tyr Val Asn Asp Ile Val Leu Ala  
145 150 155 160

HDAC-5004-C1 Sequence List.ST25.txt

Ile Leu Glu Leu Leu Lys Tyr His Gln Arg Val Leu Tyr Ile Asp Ile  
165 170 175

Asp Ile His His Gly Asp Gly Val Glu Glu Ala Phe Tyr Thr Thr Asp  
180 185 190

Arg Val Met Thr Val Ser Phe His Lys Tyr Gly Glu Tyr Phe Pro Gly  
195 200 205

Thr Gly Asp Leu Arg Asp Ile Gly Ala Gly Lys Gly Lys Tyr Tyr Ala  
210 215 220

Val Asn Phe Pro Met Arg Asp Gly Ile Asp Asp Glu Ser Tyr Gly Gln  
225 230 235 240

Ile Phe Lys Pro Ile Ile Ser Lys Val Met Glu Met Tyr Gln Pro Ser  
245 250 255

Ala Val Val Leu Gln Cys Gly Ala Asp Ser Leu Ser Gly Asp Arg Leu  
260 265 270

Gly Cys Phe Asn Leu Thr Val Lys Gly His Ala Lys Cys Val Glu Val  
275 280 285

Val Lys Thr Phe Asn Leu Pro Leu Leu Met Leu Gly Gly Gly Gly Tyr  
290 295 300

Thr Ile Arg Asn Val Ala Arg Cys Trp Thr Tyr Glu Thr Ala Val Ala  
305 310 315 320

Leu Asp Cys Glu Ile Pro Asn Glu Leu Pro Tyr Asn Asp Tyr Phe Glu  
325 330 335

Tyr Phe Gly Pro Asp Phe Lys Leu His Ile Ser Pro Ser Asn Met Thr  
340 345 350

Asn Gln Asn Thr Pro Glu Tyr Met Glu Lys Ile Lys Gln Arg Leu Phe  
355 360 365

Glu Asn Leu Arg Met Leu Pro His Ala Pro Gly Val Gln Met Gln Ala  
370 375 380

Ile Pro Glu Asp Ala Val His Glu Asp Ser Gly Asp Glu Asp Gly Glu  
385 390 395 400

Asp Pro Asp Lys Arg Ile Ser Ile Arg Ala Ser Asp Lys Arg Ile Ala  
405 410 415

# HDAC-5004-C1 Sequence List.ST25.txt

Cys Asp Glu Glu Phe Ser Asp Ser Glu Asp Glu Gly Glu Gly Gly Arg  
420 425 430

Arg Asn Val Ala Asp His Lys Lys Gly Ala Lys Lys Ala Arg Ile Glu  
435 440 445

Glu Asp Lys Lys Glu Thr Glu Asp Lys Lys Thr Asp Val Lys Glu Glu  
450 455 460

Asp Lys Ser Lys Asp Asn Ser Gly Glu Lys Thr Asp Thr Lys Gly Thr  
465 470 475 480

Lys Ser Glu Gln Leu Ser Asn Pro  
485

<210> 2  
<211> 1497  
<212> DNA  
<213> Homo sapiens

<220>  
<221> Human cDNA sequence encoding HDAC-2  
<222> (1)..(1497)

<400> 2  
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ggatgatattg gaaattatta ttatggacag ggtcatccca tgaagcctca tagaatccgc 120  
atgacccata acttgctggt aaattatggc ttatacagaa aaatggaaat atataggccc 180  
cataaagcca ctgccgaaga aatgacaaaa tatcacagtg atgagtatat caaatttcta 240  
cggtaataa gaccagataa catgtctgag tatagtaagc agatgcagag atttaatggt 300  
ggagaagatt gtccagtgtt tgatggactc tttgagtttt gtcagctctc aactggcggg 360  
tcagttgctg gagctgtgaa gttaaaccga caacagactg atatggctgt taattgggct 420  
ggaggattac atcatgctaa gaaatcagaa gcatcaggat tctgttacgt taatgatatt 480  
gtgcttgcca tccttgaatt actaaagtat catcagagag tcttatatat tgatatagat 540  
attcatcatg gtgatgggtg tgaagaagct ttttatacaa cagatcgtgt aatgacggta 600  
tcattccata aatatgggga atactttcct ggcacaggag acttgaggga tattggtgct 660  
ggaaaaggca aatactatgc tgtcaatttt ccaatgagag atggtataga tgatgagtca 720  
tatgggcaga tatttaagcc tattatctca aaggatgatg agatgtatca acctagtgt 780  
gtggtattac agtgtggtgc agactcatta tctggtgata gactgggttg tttcaatcta 840  
acagtcaaag gtcattgctaa atgtgtagaa gttgtaaaaa cttttaactt accattactg 900

# HDAC-5004-C1 Sequence List.ST25.txt

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atgcttggag gaggtggcta cacaatccgt aatgttgctc gatgttggac atatgagact 960
gcagttgccc ttgattgtga gattcccaat gagttgccat ataatgatta ctttgagtat 1020
tttggaccag acttcaaact gcatattagt ccttcaaaca tgacaaacca gaacactcca 1080
gaatatatgg aaaagataaa acagcgtttg ttgaaaatt tgcgcatggt acctcatgca 1140
cctggtgtcc agatgcaagc tattccagaa gatgctgttc atgaagacag tggagatgaa 1200
gatggagaag atccagacaa gagaatttct attcgagcat cagacaagcg gatagcttgt 1260
gatgaagaat tctcagattc tgaggatgaa ggagaaggag gtcgaagaaa tgtggctgat 1320
cataagaaag gagcaaagaa agctagaatt gaagaagata agaaagaaac agaggacaaa 1380
aaaacagacg ttaaggaaga agataaatcc aaggacaaca gtggtgaaaa aacagatacc 1440
aaaggaacca aatcagaaca gctcagcaac cccgggcatc accatcacca tcactaa 1497

```

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<210> 3
<211> 495
<212> PRT
<213> Artificial sequence

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<220>
<223> Amino acid sequence for full length human HDAC-2 with a
      C-terminal 6x-histidine tag

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```

<400> 3

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Met Ala Tyr Ser Gln Gly Gly Gly Lys Lys Lys Val Cys Tyr Tyr Tyr
1          5          10          15

```

```

Asp Gly Asp Ile Gly Asn Tyr Tyr Tyr Gly Gln Gly His Pro Met Lys
20          25          30

```

```

Pro His Arg Ile Arg Met Thr His Asn Leu Leu Leu Asn Tyr Gly Leu
35          40          45

```

```

Tyr Arg Lys Met Glu Ile Tyr Arg Pro His Lys Ala Thr Ala Glu Glu
50          55          60

```

```

Met Thr Lys Tyr His Ser Asp Glu Tyr Ile Lys Phe Leu Arg Ser Ile
65          70          75          80

```

```

Arg Pro Asp Asn Met Ser Glu Tyr Ser Lys Gln Met Gln Arg Phe Asn
85          90          95

```

```

Val Gly Glu Asp Cys Pro Val Phe Asp Gly Leu Phe Glu Phe Cys Gln
100         105         110

```

```

Leu Ser Thr Gly Gly Ser Val Ala Gly Ala Val Lys Leu Asn Arg Gln
115         120         125

```

HDAC-5004-C1 Sequence List.ST25.txt

Gln Thr Asp Met Ala Val Asn Trp Ala Gly Gly Leu His His Ala Lys  
130 135 140

Lys Ser Glu Ala Ser Gly Phe Cys Tyr Val Asn Asp Ile Val Leu Ala  
145 150 155 160

Ile Leu Glu Leu Leu Lys Tyr His Gln Arg Val Leu Tyr Ile Asp Ile  
165 170 175

Asp Ile His His Gly Asp Gly Val Glu Glu Ala Phe Tyr Thr Thr Asp  
180 185 190

Arg Val Met Thr Val Ser Phe His Lys Tyr Gly Glu Tyr Phe Pro Gly  
195 200 205

Thr Gly Asp Leu Arg Asp Ile Gly Ala Gly Lys Gly Lys Tyr Tyr Ala  
210 215 220

Val Asn Phe Pro Met Arg Asp Gly Ile Asp Asp Glu Ser Tyr Gly Gln  
225 230 235 240

Ile Phe Lys Pro Ile Ile Ser Lys Val Met Glu Met Tyr Gln Pro Ser  
245 250 255

Ala Val Val Leu Gln Cys Gly Ala Asp Ser Leu Ser Gly Asp Arg Leu  
260 265 270

Gly Cys Phe Asn Leu Thr Val Lys Gly His Ala Lys Cys Val Glu Val  
275 280 285

Val Lys Thr Phe Asn Leu Pro Leu Leu Met Leu Gly Gly Gly Gly Tyr  
290 295 300

Thr Ile Arg Asn Val Ala Arg Cys Trp Thr Tyr Glu Thr Ala Val Ala  
305 310 315 320

Leu Asp Cys Glu Ile Pro Asn Glu Leu Pro Tyr Asn Asp Tyr Phe Glu  
325 330 335

Tyr Phe Gly Pro Asp Phe Lys Leu His Ile Ser Pro Ser Asn Met Thr  
340 345 350

Asn Gln Asn Thr Pro Glu Tyr Met Glu Lys Ile Lys Gln Arg Leu Phe  
355 360 365

Glu Asn Leu Arg Met Leu Pro His Ala Pro Gly Val Gln Met Gln Ala  
370 375 380

# HDAC-5004-C1 Sequence List.ST25.txt

Ile Pro Glu Asp Ala Val His Glu Asp Ser Gly Asp Glu Asp Gly Glu  
385 390 395 400

Asp Pro Asp Lys Arg Ile Ser Ile Arg Ala Ser Asp Lys Arg Ile Ala  
405 410 415

Cys Asp Glu Glu Phe Ser Asp Ser Gly Asp Glu Gly Glu Gly Gly Arg  
420 425 430

Arg Asn Val Ala Asp His Lys Lys Gly Ala Lys Lys Ala Arg Ile Glu  
435 440 445

Glu Asp Lys Lys Glu Thr Glu Asp Lys Lys Thr Asp Val Lys Glu Glu  
450 455 460

Asp Lys Ser Lys Asp Asn Ser Gly Glu Lys Thr Asp Thr Lys Gly Thr  
465 470 475 480

Lys Ser Glu Gln Leu Ser Asn Pro Gly His His His His His His  
485 490 495

<210> 4  
<211> 378  
<212> PRT  
<213> Homo sapiens

<220>  
<221> Amino acid sequence for CLEC fragment of human HDAC-2  
<222> (1)..(378)

<400> 4

Ser Gln Gly Gly Gly Lys Lys Lys Val Cys Tyr Tyr Tyr Asp Gly Asp  
1 5 10 15

Ile Gly Asn Tyr Tyr Tyr Gly Gln Gly His Pro Met Lys Pro His Arg  
20 25 30

Ile Arg Met Thr His Asn Leu Leu Leu Asn Tyr Gly Leu Tyr Arg Lys  
35 40 45

Met Glu Ile Tyr Arg Pro His Lys Ala Thr Ala Glu Glu Met Thr Lys  
50 55 60

Tyr His Ser Asp Glu Tyr Ile Lys Phe Leu Arg Ser Ile Arg Pro Asp  
65 70 75 80

Asn Met Ser Glu Tyr Ser Lys Gln Met Gln Arg Phe Asn Val Gly Glu  
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85

90

95

Asp Cys Pro Val Phe Asp Gly Leu Phe Glu Phe Cys Gln Leu Ser Thr  
100 105 110

Gly Gly Ser Val Ala Gly Ala Val Lys Leu Asn Arg Gln Gln Thr Asp  
115 120 125

Met Ala Val Asn Trp Ala Gly Gly Leu His His Ala Lys Lys Ser Glu  
130 135 140

Ala Ser Gly Phe Cys Tyr Val Asn Asp Ile Val Leu Ala Ile Leu Glu  
145 150 155 160

Leu Leu Lys Tyr His Gln Arg Val Leu Tyr Ile Asp Ile Asp Ile His  
165 170 175

His Gly Asp Gly Val Glu Glu Ala Phe Tyr Thr Thr Asp Arg Val Met  
180 185 190

Thr Val Ser Phe His Lys Tyr Gly Glu Tyr Phe Pro Gly Thr Gly Asp  
195 200 205

Leu Arg Asp Ile Gly Ala Gly Lys Gly Lys Tyr Tyr Ala Val Asn Phe  
210 215 220

Pro Met Arg Asp Gly Ile Asp Asp Glu Ser Tyr Gly Gln Ile Phe Lys  
225 230 235 240

Pro Ile Ile Ser Lys Val Met Glu Met Tyr Gln Pro Ser Ala Val Val  
245 250 255

Leu Gln Cys Gly Ala Asp Ser Leu Ser Gly Asp Arg Leu Gly Cys Phe  
260 265 270

Asn Leu Thr Val Lys Gly His Ala Lys Cys Val Glu Val Val Lys Thr  
275 280 285

Phe Asn Leu Pro Leu Leu Met Leu Gly Gly Gly Gly Tyr Thr Ile Arg  
290 295 300

Asn Val Ala Arg Cys Trp Thr Tyr Glu Thr Ala Val Ala Leu Asp Cys  
305 310 315 320

Glu Ile Pro Asn Glu Leu Pro Tyr Asn Asp Tyr Phe Glu Tyr Phe Gly  
325 330 335

# HDAC-5004-C1 Sequence List.ST25.txt

Pro Asp Phe Lys Leu His Ile Ser Pro Ser Asn Met Thr Asn Gln Asn  
340 345 350

Thr Pro Glu Tyr Met Glu Lys Ile Lys Gln Arg Leu Phe Glu Asn Leu  
355 360 365

Arg Met Leu Pro His Ala Pro Gly Val Gln  
370 375

<210> 5  
<211> 405  
<212> PRT  
<213> Homo sapiens

<220>  
<221> Amino acid sequence for immobilized Trypsin fragment of human  
HDAC-2  
<222> (1)..(405)

<400> 5

Met Ala Tyr Ser Gln Gly Gly Gly Lys Lys Lys Val Cys Tyr Tyr Tyr  
1 5 10 15

Asp Gly Asp Ile Gly Asn Tyr Tyr Tyr Gly Gln Gly His Pro Met Lys  
20 25 30

Pro His Arg Ile Arg Met Thr His Asn Leu Leu Leu Asn Tyr Gly Leu  
35 40 45

Tyr Arg Lys Met Glu Ile Tyr Arg Pro His Lys Ala Thr Ala Glu Glu  
50 55 60

Met Thr Lys Tyr His Ser Asp Glu Tyr Ile Lys Phe Leu Arg Ser Ile  
65 70 75 80

Arg Pro Asp Asn Met Ser Glu Tyr Ser Lys Gln Met Gln Arg Phe Asn  
85 90 95

Val Gly Glu Asp Cys Pro Val Phe Asp Gly Leu Phe Glu Phe Cys Gln  
100 105 110

Leu Ser Thr Gly Gly Ser Val Ala Gly Ala Val Lys Leu Asn Arg Gln  
115 120 125

Gln Thr Asp Met Ala Val Asn Trp Ala Gly Gly Leu His His Ala Lys  
130 135 140

Lys Ser Glu Ala Ser Gly Phe Cys Tyr Val Asn Asp Ile Val Leu Ala  
145 150 155 160



HDAC-5004-C1 Sequence List.ST25.txt

Ile Leu Glu Leu Leu Lys Tyr His Gln Arg Val Leu Tyr Ile Asp Ile  
165 170 175

Asp Ile His His Gly Asp Gly Val Glu Glu Ala Phe Tyr Thr Thr Asp  
180 185 190

Arg Val Met Thr Val Ser Phe His Lys Tyr Gly Glu Tyr Phe Pro Gly  
195 200 205

Thr Gly Asp Leu Arg Asp Ile Gly Ala Gly Lys Gly Lys Tyr Tyr Ala  
210 215 220

Val Asn Phe Pro Met Arg Asp Gly Ile Asp Asp Glu Ser Tyr Gly Gln  
225 230 235 240

Ile Phe Lys Pro Ile Ile Ser Lys Val Met Glu Met Tyr Gln Pro Ser  
245 250 255

Ala Val Val Leu Gln Cys Gly Ala Asp Ser Leu Ser Gly Asp Arg Leu  
260 265 270

Gly Cys Phe Asn Leu Thr Val Lys Gly His Ala Lys Cys Val Glu Val  
275 280 285

Val Lys Thr Phe Asn Leu Pro Leu Leu Met Leu Gly Gly Gly Gly Tyr  
290 295 300

Thr Ile Arg Asn Val Ala Arg Cys Trp Thr Tyr Glu Thr Ala Val Ala  
305 310 315 320

Leu Asp Cys Glu Ile Pro Asn Glu Leu Pro Tyr Asn Asp Tyr Phe Glu  
325 330 335

Tyr Phe Gly Pro Asp Phe Lys Leu His Ile Ser Pro Ser Asn Met Thr  
340 345 350

Asn Gln Asn Thr Pro Glu Tyr Met Glu Lys Ile Lys Gln Arg Leu Phe  
355 360 365

Glu Asn Leu Arg Met Leu Pro His Ala Pro Gly Val Gln Met Gln Ala  
370 375 380

Ile Pro Glu Asp Ala Val His Glu Asp Ser Gly Asp Glu Asp Gly Glu  
385 390 395 400

Asp Pro Asp Lys Arg

405 HDAC-5004-C1 Sequence List.ST25.txt